48/50A020-060,48/50P030-100, 48/50Z030-105 Humidity Sensor for Enthalpy Control Accessory

Installation Instructions

Part Number CRHUMDSN001B00

The accessory humidity sensor can be used with all 48/50A020-060, 48/50P030-100, and 48/50Z030-105 units with *Comfort*Link™ controls.

PACKAGE CONTENTS

ITEM	QUANTITY
Humidity Sensor	1
6-20, 3/4-in. long Sheet Metal Screw	2
Wiring Harness, 42-in., 2 Pin*	1

*Wiring harness is not used.

GENERAL

The humidity sensor (see Fig. 1) measures the amount of moisture in the air. It is used in conjunction with a temperature sensor to determine the enthalpy content of the air. The humidity sensor sends a 4 to 20 mA signal to the *Comfort*Link™ controller.

On all units, the outdoor air temperature sensor and the return air temperature sensor are standard. For single enthalpy control, an accessory humidity sensor (part no. CRHUMDSN001B00) is required. Two accessory humidity sensors (part no. CRHUMDSN001B00) are required for differential enthalpy control.

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform the basic maintenance functions of replacing filters. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit, and other safety precautions that may apply.

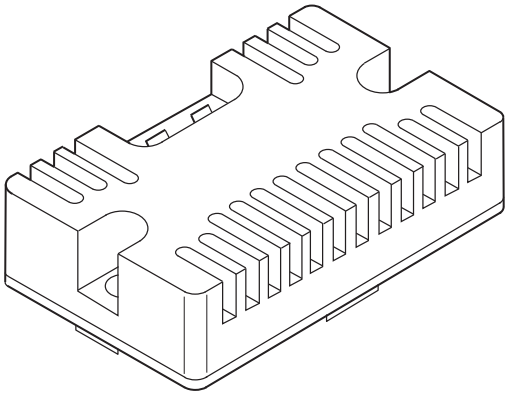

Fig. 1 — Humidity Sensor

INSTALLATION

IMPORTANT: For horizontal applications, it is easiest to install the humidity sensor prior to making duct connections.

⚠ WARNING

Prior to installation of this accessory, make sure all power is disconnected to the unit and locked out. Failure to disconnect power supply prior to servicing may result in serious injury.

⚠ CAUTION

When removing panels from the unit, be careful not to damage the roof or other surfaces with the panels.

48/50A Series Units

OUTDOOR AIR HUMIDITY SENSOR

1. Remove the wiring harness that is connected to the humidity sensor.

NOTE: The 42-in. wiring harness is not used.

2. Install the outdoor air humidity sensor on the economizer using the screws provided (see Fig. 2). Attachment holes are pre-punched.
3. Electrical connections are made to an existing harness that is factory-routed to the sensor mounting location. Connect outdoor air humidity sensor to the harness plug labeled OARH. The harness is factory-wired to the economizer control board (ECB1), terminals J5-4 (BLU) and J5-5 (ORN).
4. Configure the *Comfort*Link™ controls for use with the humidity sensor. Refer to the unit Controls and Troubleshooting literature for more information.

RETURN AIR HUMIDITY SENSOR

1. Remove the wiring harness that is connected to the humidity sensor.

NOTE: The 42-in. wiring harness is not used.

2. Install the return air humidity sensor on the economizer using the screws provided (see Fig. 2). Attachment holes are pre-punched.
3. Electrical connections are made to an existing harness that is factory-routed to the sensor mounting location. Connect return air humidity sensor to the harness plug labeled RARH. The harness is factory-wired to the economizer control board (ECB1), terminals J5-1 (BLU) and J5-2 (ORN).
4. Configure the *Comfort*Link controls for use with the humidity sensor. Refer to the unit Controls and Troubleshooting literature for more information.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

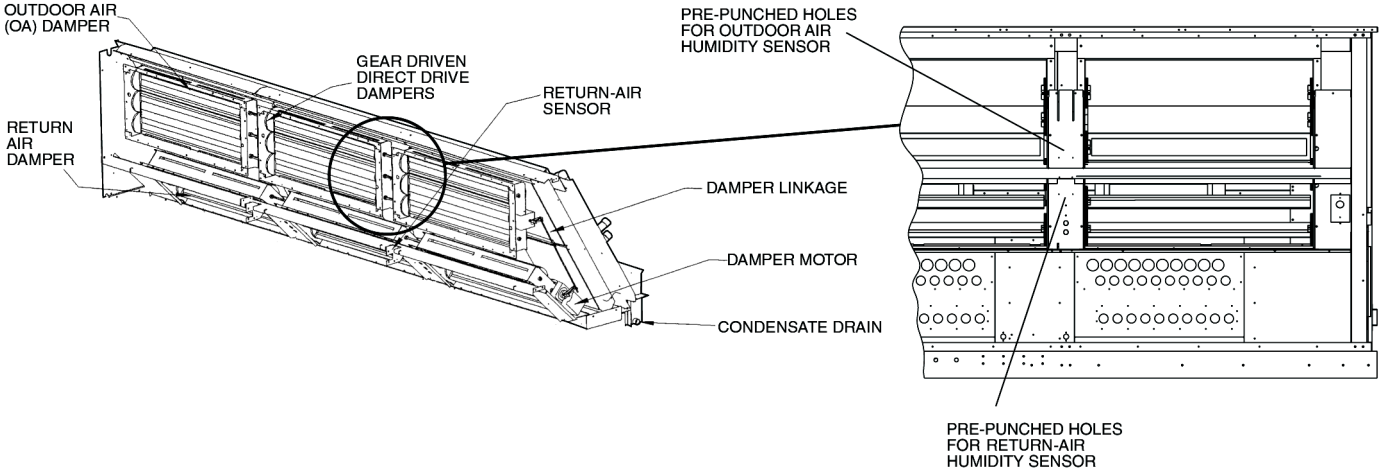

Fig. 2 — Typical Outdoor and Return Air Humidity Sensor Locations for 48/50A Series Units

48/50P and 48/50Z Series Units

OUTDOOR AIR HUMIDITY SENSOR

1. Remove the wiring harness that is connected to the humidity sensor. This wiring harness is not used.
2. Remove the economizer side hood and filters to gain access to the location where the humidity sensor will be mounted. See Fig. 3.
3. Install the humidity sensor using the screws provided. See Fig. 3. Attachment holes are pre-punched.
4. Electrical connections are made to an existing harness that is factory-routed to the sensor mounting location. Find the pair of wires labeled OARH. Connect the red wire to the "+" terminal of the humidity sensor. Connect the black wire to the "–" terminal of the sensor.
5. Configure the *Comfort*Link™ controls for use with the humidity sensor. Refer to the unit Controls and Troubleshooting literature for details.
6. Reinstall the filters and hood.

RETURN AIR HUMIDITY SENSOR

1. Remove the wiring harness that is connected to the humidity sensor. This wiring harness is not used.
2. Open the power exhaust section door/panel to gain access to the location where the humidity sensor will be mounted. See Fig. 4.
3. Install the humidity sensor using the screws provided. See Fig. 4. Attachment holes are pre-punched.
4. Electrical connections are made to an existing harness that is factory-routed to the sensor mounting location. Find the pair of wires labeled RARH. Connect the blue wire to the "+" terminal of the humidity sensor. Connect the violet wire to the "–" terminal of the sensor.
5. Configure the *Comfort*Link controls for use with the humidity sensor. Refer to the unit Controls and Troubleshooting literature for details.
6. Close and secure all doors and panels.

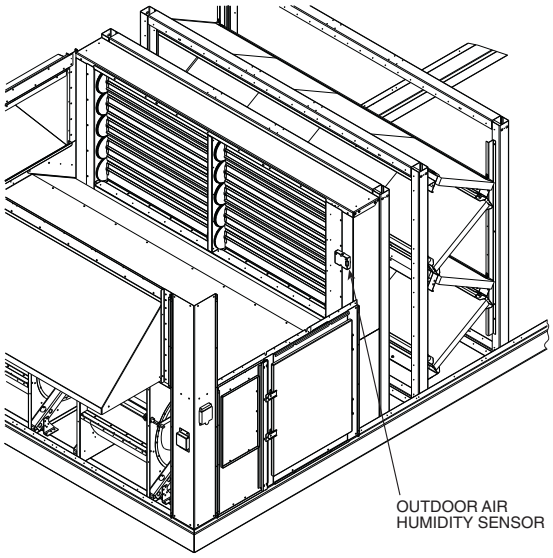

Fig. 3 — Typical Outdoor Air Humidity Sensor Location for 48/50P and 48/50Z Series Units

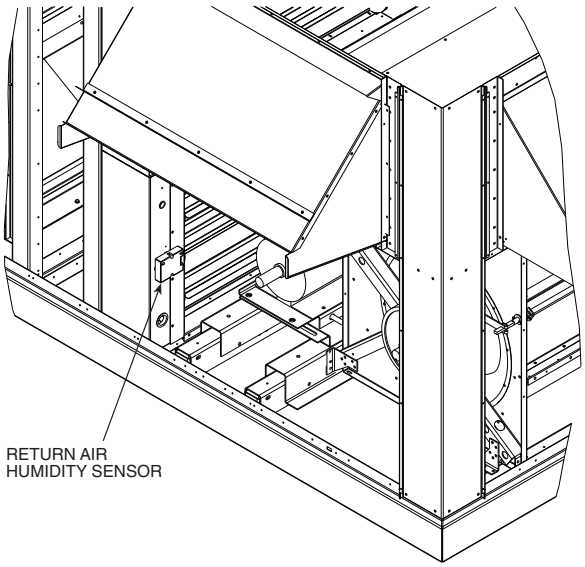

Fig. 4 — Typical Return Air Humidity Sensor Location for 48/500P and 48/50Z Series Units

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